

Descriptions

- High voltage application

Features

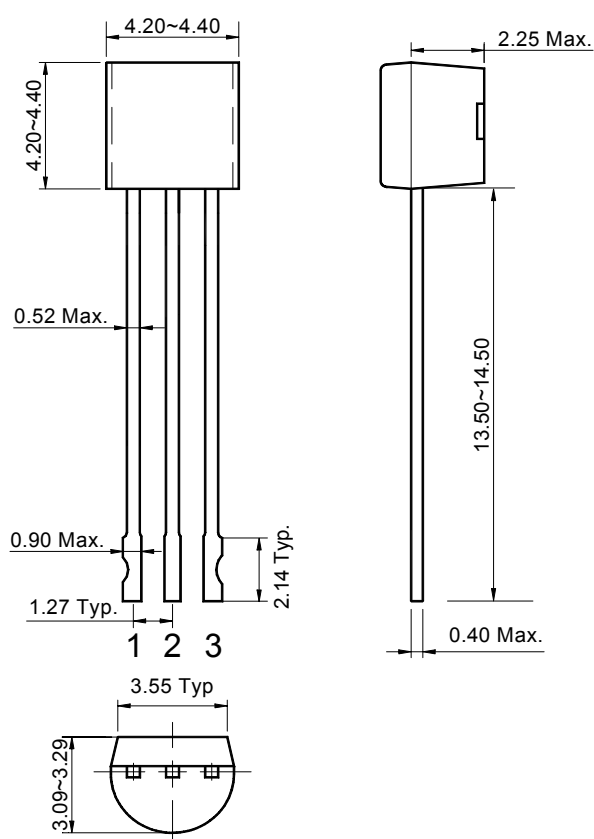
- High collector-emitter voltage : $V_{CE0} = -300V$
- Complementary pair with STC42N

Ordering Information

Type NO.	Marking	Package Code
STA92N	STA92	T0-92N

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-300	V
Collector-emitter voltage	V_{CEO}	-300	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-500	mA
Collector power dissipation	P_C	400	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-300	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -300\text{V}$, $I_E = 0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6\text{V}$, $I_C = 0$	-	-	-0.1	μA
DC current gain	h_{FE}^*	$V_{CE} = -10\text{V}$, $I_C = -30\text{mA}$	40	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = -20\text{mA}$, $I_B = -2\text{mA}$	-	-	-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = -20\text{mA}$, $I_B = -2\text{mA}$	-	-	-0.9	V
Base-emitter voltage	V_{BE}	$V_{CE} = -10\text{V}$, $I_C = -30\text{mA}$	-	-0.7	-0.9	V
Transition frequency	f_T	$V_{CE} = -20\text{V}$, $I_C = -10\text{mA}$	-	80	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -20\text{V}$, $I_E = 0$, $f = 1\text{MHz}$	-	3	-	pF

* : Pulse Tester : Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$

Electrical Characteristic Curves

Fig. 1 $h_{FE} - I_C$

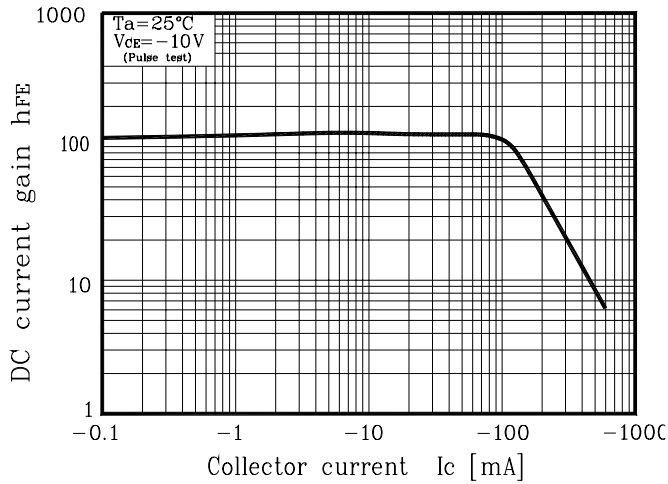


Fig. 2 $V_{CE(sat)}, V_{BE(sat)} - I_C$

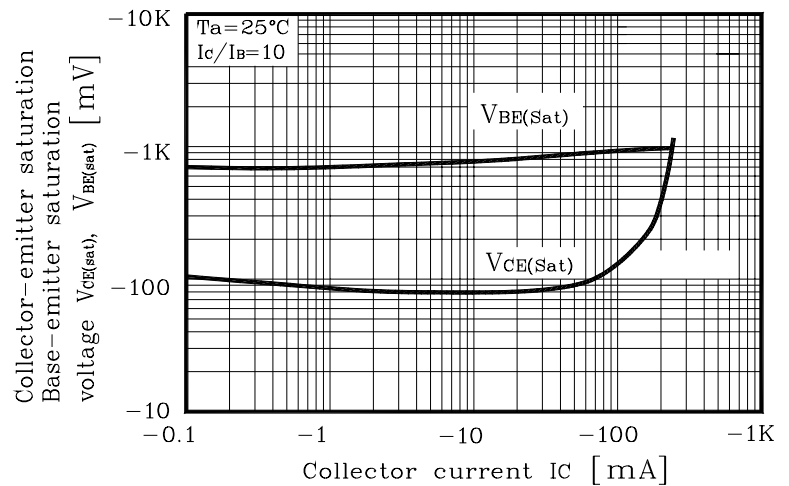


Fig. 3 $f_T - I_C$

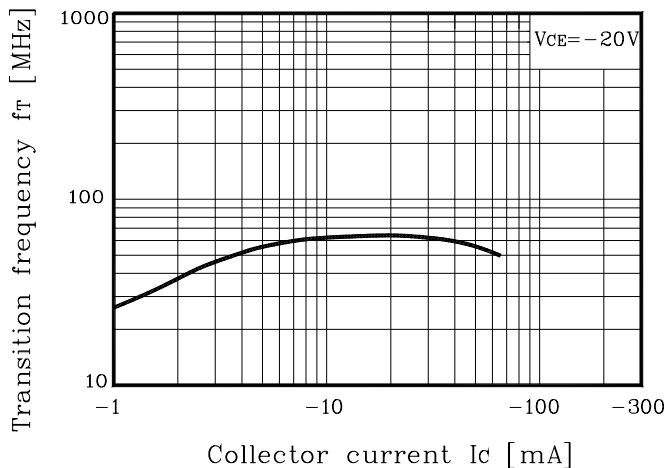
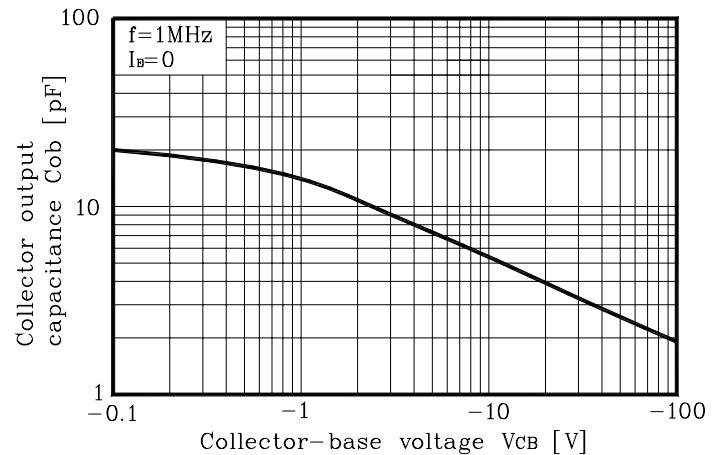


Fig. 4 $C_{ob} - V_{CB}$



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